RoU Project Verification Report Form (VR)	
BASIC INFORMATION	
Name of approved UWR Project Verifier / Reference No.	SQAC Certification Pvt. Ltd.
Type of Accreditation	☒ RoU Accreditation UWR ☐ Water Audit/Water Footprint Expertise
Approved UWR RoU Scopes for Project Verification	RoU Scope 3 - Measures that improve the quality of existing ground water through dilution with rainwater runoff.
Validity of UWR approval of Verifier	April 2022 onwards.
Completion date of this VR	13/07/2024
Title of the project activity	Good Earth Melange, Kochi.
Project reference no.	UWR ID: **422**
Name of Entity requesting verification service	Good Earth Melange Owners' Association & Optimor Ventures LLC
Contact details of the representative of the Entity, requesting verification service	Chirag Bhimani - Exe. Director Optimor Ventures LLC LLC, USA Email id: chirag@optimor.co
Country where project is located	India.
Applied reference documents used for estimation (approved water data and reference guides under the UWR Rou Standard used)	UWR Rainwater Offset Unit Standard Rainfall Data: Utilized rainfall data from the Customized

	Rainfall Information System (CRIS), Hydromet Division India, Meteorological department, Ministry of Earth Sciences. Groundwater Data: Referenced statistics from the Central Ground Water Board (CGWB) and State Ground Water Department. Hydrogeological Data: Included information from the Centre for Earth Science Studies (CESS) and the Centre for Water Resources Development and Management (CWRDM). Geographical Data: Used geographical area and land use data from administrative sources like the census and local government records.
Project Verification Criteria: Mandatory requirements to be assessed	☒ UWR Standard ☒ Applicable Approved Calculations ☒ Applicable Legal requirements /rules of host country ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Water Data Sets ☒ Do No Harm Test ☒ RoU calculations ☒ PCNMR

	☒ No Double Counting ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria
Project Verifier's Confirmation: The *UWR Project Verifier* has verified the UWR project activity and therefore confirms the following:	The UWR RoU Project Verifier SQAC Certification Pvt. Ltd., certifies the following with respect to the UWR Project Activity Good Earth Melange, Kochi ☒ The Project Owner has correctly described the Project Activity in the PCNMR dated 03/01/2024 including the applicability of the guidance documents and water data as outlined in the UWR RoU Standard, Scope 3 - Measures that improve the quality of existing ground water through dilution with rainwater runoff and meets the applicability conditions and has achieved the estimated RoUs, complies with the monitoring methodology and has calculated RoU estimates correctly and conservatively. ☒ The Project Activity is likely to generate **7,625 RoUs** as indicated in the PCNMR, which are applicable with UWR rules ☒ The Project Activity is not likely to cause any net-harm

	to the environment and/or society ☒ The Project Activity complies with all the applicable UWR rules and therefore recommends UWR Program to register the Project activity with RoUs.
Project Verification Report, reference number and date of approval	Verification Report UWR Project ID: 422 dated 13/07/2024
Name of the authorised personnel of UWR Project Verifier and his/her signature with date	 Santosh Nair Lead Verifier (Signature) SQAC Certification Pvt Ltd

PROJECT VERIFICATION REPORT

Optimor Ventures LLC LLC has contracted SQAC Certification Pvt. Ltd. to carry out the verification of the project activity "Good Earth Melange, Kochi", UWR approved project ID:422, to establish number of RoUs generated by water project over the monitoring period from **01/04/2020 – 31/12/2023** (03 years 08 months). The project activity aims to implement a rooftop rainwater harvesting system (RWHS) for groundwater recharge.

We believe that the total Rainwater Offset Units or Water Credits (RoU) generated over the monitoring / verification period stated in the Project Concept Note & Monitoring Report (PCNMR), submitted to us is accurate and in line with the UWR guidelines.

The Rainwater Offset Units or Water Credits (RoU) were calculated based on UWR Protocols which draws reference from, UWR Rainwater (RoU) Standard, version 6.1. The verification was done remotely by way of video calls / verification, phone calls and submission of documents for verification through emails as per UWR guidelines.

SQAC is able to certify that the Rainwater Offset Units or Water Credits (RoU) from the project Good Earth Melange, Kochi, India, (UWR ID – 422) for the period 01/04/2020 to 31/12/2023 amounts to **7,625 RoUs**

Project Verification team, technical reviewer and approver

Section B. Project Verification Team

Sr. No.	Role	Last name	First name	Affiliation	Involvement in		
					Doc review	Off-Site inspection	Interviews
1.	Team Leader	Nair	Santosh	n/a	yes	yes	yes
2.	Validator	Nair	Santosh	n/a	yes	yes	yes

Technical reviewer and approver of the Project Verification report

Sr. No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer	IR	Shinganapurkar	Praful	SQAC Certification Pvt. Ltd.
2.	Approver	IR	Shinganapurkar	Praful	SQAC Certification Pvt. Ltd.

Section C. Means of Project Verification

C.1. Desk/document review

As part of the review and validation process, Optimor Ventures LLC submitted a Project Concept Note & Monitoring Report (PCNMR), Water Calculation Sheet and additional data provided upon request pertaining to this project for examination to the Lead Verifier. These documents were thoroughly reviewed to ensure compliance with relevant standards and guidelines, and to validate the accuracy and completeness of the information provided.

C.2. Off-site inspection

Date of offsite inspection: 26/06/2024			
Sr. No.	**Activity performed Off-Site**	**Site location**	**Date**
1.	Interview conducted over Video call / Telephonic discussions.	Kochi, Kerala	26/06/2024
2.	Supporting documents provided before, during, after the verification.	Kochi, Kerala	26/06/2024 till 03/07/2024

C.3. Interviews

Sr. No.	**Interview**			**Date**	**Subject**
	Name	**Designation**	**Affiliation**		
1	Binu Jose	Director	Good Earth Melange Owners' Association (GEMOA), Kochi	26/06/2024	Site layout, Design Specifications
2	Manoj R	Secretary	Good Earth Melange, Kochi	26/06/2024	Project commissioning and overview
3	Chirag Bhimani	Exe. Director	Optimor Ventures LLC	26/06/2024	Double Counting

C.4. Sampling approach

Not applicable

C.5. Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	No. of CL	No. of CAR	No. of FAR
Rainwater Offset Units or Water Credits (RoU)			
Identification and Eligibility of project type	Nil	Nil	Nil
General description of project activity	Nil	Nil	Nil
Application and selection of methodologies and standardized baselines			
- Application of RoU methodologies and standardized data sets	Nil	Nil	Nil
- Deviation from methodology and/or methodological tool	Nil	Nil	Nil
- Clarification on applicability of methodology, tool and/or standardized data sets	Nil	Nil	Nil
- Project boundary and unutilized water sources.	Nil	Nil	Nil
- Likely scenario without RoU Project	Nil	Nil	Nil
- Estimation of RoU's	Nil	Nil	Nil
- PCNMR	Nil	Nil	Nil
Start date, crediting period and duration	Nil	Nil	Nil
Positive environmental impacts on water table and/or groundwater recharge and/or water security in the area	Nil	Nil	Nil
Project Owner- Identification and communication	Nil	Nil	Nil
Others (please specify)	Nil	Nil	Nil
Total	Nil	Nil	Nil

Section D. Project Verification Findings

D.1. Identification and eligibility of project type (Approved Project Activities (Positive List))

Means of Project Verification	Project Documentation: Review the project's concept note and monitoring report to ensure it aligns with approved activities. Compliance with Standards: Confirm the project adheres to relevant standards, such as the UWR RoU Standard. Off-Site Verification: Conduct on-site inspections to verify the implementation and operation of the rainwater harvesting system. Stakeholder Consultation: Engage with stakeholders, including the project owner and local community, to gather insights on the project's impact and performance.
Findings	Upon verification it was found that; Project Type: The project is a rooftop rainwater harvesting system (RWHS) for groundwater recharge, which is an approved activity under water credit programs. Sustainability Measures: The design includes innovative measures for sustainable living, such as cavity walls and air vents to keep indoors cool, and a rainwater harvesting system to reduce groundwater depletion. Operational Responsibility: The Good Earth Melange Owners' Association (GEMOA) is responsible for the operation and maintenance of the RWHS, ensuring its functionality during the monsoon period. Environmental Impact: The project contributes to water security by recharging the local aquifer, improving groundwater quality, and reducing water logging and drainage stress during monsoons. This project aligns with the UWR's positive list of approved activities for water credit programs, focusing on sustainable

	water management and conservation.
Conclusion	In conclusion, the project description adheres to the UWR-approved format and fulfills the criteria outlined in both the UWR RoU Verification Standard version 2 and UWR Rainwater Offset Standard version 6.1. The PCNMR has been submitted to the verifier and verified accordingly. The methodology referenced has been applied correctly to describe the project type. Verification of the project aggregator's eligibility is conducted using the UWR communication agreement. Furthermore, the project aligns with the verification standard, UWR RoU Verification Standard version 2 and UWR Rainwater Offset Standard version 6.1. Overall, the project activity satisfactorily meets the requirements of the UWR RoU Verification Standard version 2 and UWR Rainwater Offset Standard version 6.1. and is therefore eligible as an approved activity under the Positive List for water credit verification.

D.2. General description of Project Activity

Means of Project Verification	Project Overview: Verify the project's name, location, and ownership by Good Earth Melange Owners' Association in Kochi, Kerala, India. Confirm the design and implementation of the tropical high-rise apartment with rainwater harvesting system for sustainable living. Technical Specifications: Check the Rainwater Harvesting System (RWHS) details, including the catchment area, type and dimensions of wells, and the installation and commissioning dates. Operational Responsibilities: Ensure the project proponent maintains the RWHS, operates flow valves, and keeps well and potable water supply in check. Confirm the maintenance of permits and ownership documents. Environmental Impact: Assess the project's contribution to groundwater recharge, improvement of groundwater quality, and reduction of water logging and drainage stress in urban areas during monsoon.
Findings	Upon verification it was found that the project activity involves a rooftop rainwater harvesting system (RWHS) at Good Earth Melange, Kochi, designed to recharge groundwater aquifers. The system collects rainwater runoff from the apartment complex's roof, diverting it to an open well for storage and aquifer recharge. The RWHS is maintained by the Good Earth Melange Owners' Association (GEMOA) and is part of a broader initiative for sustainable living within the complex. The project contributes to water security by reducing groundwater depletion, improving groundwater quality through dilution, and addressing urban drainage issues during monsoon seasons. Overall, the project demonstrates a practical application of rainwater harvesting in an urban residential setting, with potential benefits for water conservation and management.

Conclusion	In conclusion, the project Good Earth Melange project in Kochi, Kerala, involves a rooftop rainwater harvesting system (RWHS) designed to recharge groundwater. The system collects rainwater runoff from the apartment complex's roof and diverts it to an open well, enhancing the local aquifer. The project is operated by the Good Earth Melange Owners' Association (GEMOA) and aims to provide sustainable water management solutions. It addresses issues like water logging, groundwater pollution, and the depletion of groundwater resources. Overall, the project contributes positively to water security and environmental sustainability in the region.

D.3. Application and selection of water data and calculation parameters

D.3.1 Application of methodology and standardized data sets

Means of Project Verification	Project Documentation Review: Examine the Project Concept Note & Monitoring Report (PCNMR) to ensure all details are consistent with the UWR RoU Standard. Off-Site Inspection: Conduct off-site audit to verify the implementation of the Rainwater Harvesting System (RWHS) as described in the PCNMR. Data Verification: Cross-check the reported data, such as catchment area, rainfall, and runoff coefficients, against standardized datasets like the India Meteorological Department's records. Stakeholder Interviews: Engage with the Good Earth Melange Owners' Association (GEMOA) and local residents to gather firsthand accounts of the RWHS operation and maintenance. Technical Assessment: Evaluate the design and functionality of the RWHS, including the well dimensions, construction, and commissioning dates, to confirm adherence to the UWR RoU Scope 3 requirements. Environmental Impact: Assess the project's contribution to groundwater recharge, water quality improvement, and flood prevention to ensure it aligns with the UWR's Do No Net Harm

	Principles.
Findings	Upon verification, the PCNMR details the Universal Water Registry's Rainwater Offset Unit Standard for a rainwater harvesting system at Good Earth Melange, Kochi. It outlines the project's scope, design, and impact on groundwater recharge, emphasizing sustainable water use. The system collects rainwater runoff, reducing groundwater depletion and providing a sustainable water source. The project serves as a model for water conservation, showcasing the benefits of rainwater harvesting in urban residential areas.
Conclusion	In conclusion, the project has effectively implemented the RWHS, contributing to water security by augmenting groundwater reserves and utilizing surplus monsoon runoff, as per the UWR Rainwater Offset Unit Standard. The project demonstrates a positive impact on the local hydrology and community water resources.

D.3.2 Clarification on applicability of methodology, tool and/or RoU estimates

Means of Project Verification	Project Overview: The project involves a Rainwater Harvesting System (RWHS) at Good Earth Melange, Kochi, aiming to recharge groundwater and conserve rainwater. Verification Methods: The verification process would include assessing the RWHS design, ensuring proper operation of flow valves, well cleaning, and potable water supply during monsoon. Verification of permits and ownership documents for the recharge installations is also crucial. RoU Estimates: Review the calculations of Rainwater Offset Units (RoUs) based on catchment area, rainfall data, runoff coefficient, and uncertainty factors to ensure accurate estimation of conserved water. Ecological Impact: Evaluate the project's ecological benefits, such as groundwater quality improvement, soil erosion reduction, and conservation of rainwater resources, to confirm the project's positive environmental impact.

Findings

Upon verification, it was found that the project aligns with the UWR RoU Standard and its contribution to sustainable water management by utilizing a basic Rainwater Harvesting System (RWHS) connecting the main outlet of the building's terrace to an open well, ensuring groundwater recharge and sustainable water yield. Quantification tools are employed to calculate the harvested water volume using the catchment area, rainfall data, runoff coefficient, and an uncertainty factor, adhering to the UWR RoU Standard. The project has successfully harvested 7,625 kilolitres of rainwater from 01/04/2020 to 31/12/2023, with the RoUs calculated post-adjustment for uncertainty and runoff coefficients.

Year	Rainfall (mm)	Rainfall (m)	Roof Area (sqm)	Total Quantity of Water Collected (cum)	Value after run off co-eff	Credits Claimed
2020	3503	3.503	924.611	3238.9	1969	**1969**
2021	3949	3.949	924.611	3651.3	2220	**2220**
2022	3345	3.345	924.611	3092.8	1880	**1880**
2023	2769	2.769	924.611	2560.2	1557	**1556**
		Total		**9983.0**	**7626.3**	**7625**

Conclusion

In conclusion, the project Good Earth Melange project in Kochi would affirm the effective implementation of a rooftop rainwater harvesting system (RWHS) for groundwater recharge. The project utilizes a straightforward and basic RWHS, connecting the main outlet of the building's terrace to an open well, which aligns with the Universal Water Registry's Rainwater Offset Unit Standard. The quantification tools and data sets, such as rainfall data and runoff coefficients, are appropriately applied to calculate the volume of harvested water, ensuring accuracy and reliability. The project also adheres to the "Do No Net Harm" principles by enhancing water yield, conserving excess water, and storing it for future use, thereby contributing positively to water security and sustainability. The methodology and tools used are suitable for the project's objectives and outcomes, demonstrating a successful case of rainwater management and groundwater replenishment. The project has successfully harvested 7625

	kilolitres of rainwater from 01/04/2020 to 31/12/2023, demonstrating effective use of rainwater and contributing to groundwater conservation.

D.3.3 Project boundary sources and RoUs

Means of Project Verification	Site Inspection: Conducting remote inspections of the project site to assess the rainwater harvesting system's setup and its integration with the local aquifer. Document Review: Examining the project's documentation, including permits, ownership documents, and maintenance records for the rainwater harvesting system. Measurement Verification: Checking the measurements of the catchment area, well dimensions, and the rainwater harvesting system's capacity to ensure they align with reported figures. Stakeholder Interviews: Interviewing the project proponent, members of the Good Earth Melange Owners' Association, and local residents to gather firsthand accounts of the system's operation and effectiveness. Data Analysis: Analyzing rainfall data, water collection records, and groundwater level trends to quantify the actual volume of water harvested and recharged into the aquifer. Impact Assessment: Evaluating the environmental and social impacts of the project, such as changes in groundwater quality, water table levels, and community water security.
Findings	Upon verification, it was found that the project boundary sources for the Good Earth Melange in Kochi, Kerala, involve a rooftop rainwater harvesting system (RWHS) that collects rainwater runoff and directs it to an open well for groundwater recharge. The RWHS is designed to improve groundwater quality through dilution and to reduce water logging during monsoon seasons. The Rainwater Offset Units (RoUs) quantification shows successful harvesting of 7,625 kilolitres of rainwater from 01/04/2020 to 31/12/2023, with the water

	being utilized for non-potable purposes within the residential complex. The project effectively contributes to water security by augmenting the groundwater reservoir and providing a sustainable water source for the community.
Conclusion	In conclusion, the project boundary sources for the Good Earth Melange in Kochi, Kerala, involve a rooftop rainwater harvesting system (RWHS) that collects rainwater runoff and directs it to an open well for groundwater recharge. The RWHS has successfully harvested 7,625 kilolitres of rainwater from 01/04/2020 to 31/12/2023, which has been utilized for various non-potable purposes, contributing to water conservation and groundwater management. The Rainwater Offset Units (RoUs) quantification, based on the catchment area and rainfall data, indicates a positive impact on the local water security by augmenting the groundwater reservoir and providing a sustainable water yield by enhancing water conservation, improving groundwater quality, and ensuring the sustainability of local water resources.

D.3.4 Baseline scenario of the water shed or activity prior to project commissioning

Means of Project Verification	Historical Data Analysis: Reviewing historical rainfall data, water usage records, and groundwater levels to establish the pre-project conditions. Off-Site Inspections: Conducting remote inspection of the watershed area to assess the natural drainage patterns and existing water conservation measures. Stakeholder Consultations: Engaging with local residents, project proponents, and authorities to gather testimonies and insights on past water management practices. Technical Assessments: Utilizing hydrological models and scientific methods to estimate the natural recharge rates and runoff coefficients before the implementation of the rainwater harvesting system.
Findings	Upon verification, it was found that the baseline scenario prior to the project's commissioning indicated significant water

	management issues, including the wastage of rainwater due to uncollected flow into drains, a decline in groundwater levels from over-extraction, absence of rainwater harvesting leading to no groundwater recharge, and potential deterioration in water quality. These findings underscored the critical need for the project to tackle water conservation and improve groundwater management.
Conclusion	In conclusion, the PCNMR details the Universal Water Registry's Rainwater Offset Unit Standard for Good Earth Melange, Kochi, focusing on rainwater harvesting systems (RWHS) for groundwater recharge. It outlines the project's scope, design, and benefits, such as reducing groundwater depletion and managing stormwater. The project utilizes rainwater runoff for groundwater recharge, enhancing water quality and conservation. It serves as a model for sustainable water management practices, highlighting the importance of community involvement in rainwater harvesting to address water scarcity and distribution issues. The document also emphasizes the potential of harvested rainwater in meeting the water needs of numerous families, advocating for widespread adoption of RWHS.

D.3.5 Implementation Benefits to Water Security

Means of Project Verification	Document Review: Examining the PCNMR, commissioning certificate, legal documentation, etc, and any other relevant documentation. Interviews: Conducting interviews with the project proponent, owners' association, and users of the well water. Measurement: Assessing the rainwater collection and recharge quantities, as well as the impact on groundwater levels. Quality Testing: Analyzing the quality of groundwater post-implementation to determine improvements due to dilution.
Findings	Upon verification, it was found that the PCNMR details the Universal Water Registry's Rainwater Offset Unit Standard

	for a project at Good Earth Melange, Kochi, focusing on sustainable living through rainwater harvesting systems (RWHS) that recharge groundwater aquifers. It outlines the project's location, design, and impact, including the collection and utilization of rainwater to reduce groundwater depletion and manage stormwater. The project serves as a model for water conservation, highlighting the importance of rainwater harvesting in urban residential areas to address water scarcity and promote environmental stewardship.
Conclusion	In conclusion, the Implementation Benefits to Water Security emphasizes the significant positive impact of the artificial recharge project on groundwater resources. The project successfully augments groundwater reservoirs by capturing surplus monsoon runoff, which would otherwise remain unutilized. This intervention not only conserves water but also improves groundwater quality through dilution, prevents flooding, raises the water table, and reduces pollution and soil erosion. Additionally, it supports domestic water needs and contributes to the sustainability of local wells, making many areas independent of tanker water supply. Overall, the project demonstrates the effectiveness of rainwater harvesting in enhancing water security and managing resources sustainably.

D.3.6 Estimation of RoUs or net water saved / recycled / reused

Means of Project Verification	Off-Site Inspection: Remote inspection of the rainwater harvesting system (RWHS) installation to ensure it matches the project documentation. Document Review: Examination of PCNMR, Commissioning Certificate, Project plan, etc., and other relevant documentation provided by the project proponent. Measurement Verification: Checking the accuracy of the catchment area, rainfall data, runoff coefficients, and uncertainty factors used in the calculations. Stakeholder Interviews: Conversations with the project owner, residents, and other stakeholders to gather qualitative evidence of the project’s impact on

	groundwater levels. Data Cross-Verification: Comparing reported data with independent sources such as meteorological department records for rainfall and groundwater level trends from local authorities.
Findings	Upon verification, it was found that the estimation of Rainwater Offset Units (RoUs) or net water saved/recycled/reused would highlight the successful implementation of a rooftop rainwater harvesting system (RWHS) at Good Earth Melange in Kochi. The system has effectively collected and utilized rainwater, preventing it from running off to the sea. Over the monitoring period from 2020 to 2023, the project harvested a total of 7,625 kilolitres of rainwater. The calculation of RoUs considered the catchment area, rainfall data, runoff coefficient, and an uncertainty factor, ensuring a conservative estimate of the water conserved. This initiative has contributed to groundwater recharge, improved water quality through dilution, and provided a sustainable water source for the community, aligning with the UWR Rainwater Offset Unit Standard's objectives of enhancing water security and promoting environmental sustainability.
Conclusion	In conclusion, for the estimation of Rainwater Offset Units (RoUs) or net water saved/recycled/reused at Good Earth Melange, Kochi, would highlight the successful implementation of a rooftop rainwater harvesting system (RWHS) that has effectively captured and utilized rainwater for groundwater recharge. The quantification tools and calculations detailed in the document indicate a total of 7,625 RoUs (1000 liters each) were collected over the monitoring period from 2020 to 2023. This initiative not only conserved a significant amount of rainwater that would have otherwise gone unutilized but also contributed to the improvement of groundwater levels and quality, demonstrating the project's positive impact on water security and sustainability in the region. The project serves as a model for similar urban residential areas, showcasing the benefits of rainwater harvesting in enhancing groundwater resources and providing a reliable water supply for domestic use.

D.3.7 PCN+Monitoring Report

Means of Project Verification	Off-Site Inspection: Conducting off-site audit to verify the implementation and operation of the Rainwater Harvesting System (RWHS). Document Review: Examining all relevant documents, such as permits, ownership papers, and maintenance records of the RWHS. Stakeholder Interviews: Talking to the project proponent, owners' association, and users of the well water to gather firsthand information about the system's performance. Measurement Verification: Checking the accuracy of reported data, such as the catchment area, rainfall, and the volume of water collected and utilized. Technical Assessment: Evaluating the design and technical aspects of the RWHS to ensure it aligns with the UWR RoU Standard principles.
Findings	Upon verification, the PCN+Monitoring Report for Good Earth Melange, Kochi, under the UWR RoU Standard, indicates a successful implementation of a Rainwater Harvesting System (RWHS) aimed at groundwater recharge. The project, operational from April 2020 to December 2023, showcases innovative sustainable measures, such as a rainwater harvesting system that feeds local aquifers, reducing groundwater depletion. The RWHS connects the building's main terrace outlet to an open well, enhancing groundwater quality through dilution with rainwater runoff. The report suggests positive outcomes, including a rise in groundwater levels, improved water quality, and sustainability of domestic wells, contributing to the conservation of rainwater resources and groundwater recharge in an urban residential setting. The project serves as a model for effective water management and conservation practices, aligning with the broader goals of environmental sustainability and resource optimization.
Conclusion	In conclusion the Project Concept Note & Monitoring

	Report (PCNMR) for the Good Earth Melange, Kochi, would highlight the successful implementation of a Rainwater Harvesting System (RWHS) that has led to significant environmental benefits. The RWHS has effectively captured rainwater, prevented runoff and contributing to groundwater recharge, which has improved water availability and quality in the area. The project has also addressed issues like flooding and groundwater pollution, while promoting sustainable living within the residential complex. The outcomes align with the objectives of conserving water resources, enhancing groundwater levels, ensuring the sustainability of water wells, and improving groundwater quality through dilution. Overall, the project serves as a model for rainwater management and groundwater conservation in urban residential areas.

D.3.8 National Water Security Index

Means of Project Verification	Data Verification: Reviewing and cross-checking the data against national databases such as the National Water Data Exchange (NAWDEX) to ensure accuracy and reliability. GIS Analysis: Utilizing Geographic Information Systems (GIS) to spatially analyze water data and identify any discrepancies or errors in the data collection process. Off-Site Inspections: Conducting off-site inspections to validate the data reported by various organizations and to assess the actual water resources and infrastructure. Stakeholder Consultation: Engaging with local stakeholders, including government agencies, NGOs, and community groups, to gather qualitative information and insights on water security. Report Evaluation: Reviewing reports and documentation provided by the organizations contributing to the index to ensure compliance with established standards and methodologies.
Findings	Upon verification it was found that, the PCNMR details the Universal Water Registry's Rainwater Offset Unit Standard for Good Earth Melange, a residential complex in Kochi, Kerala. It outlines the project's concept, design, and

	implementation of a rainwater harvesting system (RWHS) aimed at groundwater recharge. The system collects rainwater runoff from the building's terrace, diverting it to an open well to improve groundwater quality and reduce depletion. The document includes project owner information, technical specifications, and the environmental context of Kerala, emphasizing the importance of sustainable water management practices in urban residential areas. It also discusses the project's impact on reducing groundwater extraction and conserving rainwater resources, serving as a model for similar sustainable initiatives.
Conclusion	In conclusion, based on the information provided in the PCNMR, the National Water Security Index would likely reflect positively due to the successful implementation of the Rainwater Harvesting System (RWHS) at Good Earth Melange, Kochi. The project has demonstrated effective groundwater recharge, conservation of rainwater, and improvement in groundwater quality through dilution. Additionally, it has addressed ecological concerns by preventing flooding and water logging and has contributed to the sustainability of local water resources. The RWHS initiative aligns with the objectives of enhancing water security by augmenting aquifer supplies, conserving surplus monsoon runoff, and providing a reliable water source for domestic use, thereby supporting the overall water security in the region.

D.3.9 Start date, crediting period and duration

Means of Project Verification	Project Documentation: Review official documents such as the Project Concept Note & Monitoring Report (PCNMR) which should state the project's start date and crediting period. Off-Site Inspection: Conduct off-site audit to remotely inspect the infrastructure and confirm the installation dates and operational status of the RWHS. Stakeholder Interviews: Engage with the project proponent, Good Earth Melange Owners' Association, and

	other stakeholders to gather testimonies and cross-verify information regarding the project's timeline and activities. Monitoring Data: Examine monitoring records and logs that detail the operation of the RWHS, including maintenance schedules and any changes made during the crediting period.
Findings	Upon verification it was found that, the project "Good Earth Melange, Kochi" under the UWR Rainwater Offset Unit Standard began its monitoring period on April 1, 2020, and continues until December 31, 2023, making the crediting period 3 years and eight months. The findings indicate that the project has been operational for this duration, with the aim of implementing sustainable rainwater harvesting systems to enhance groundwater recharge and ensure water security in the region. The project's design and maintenance are overseen by the Good Earth Melange Owners' Association, ensuring proper functioning and adherence to environmental standards throughout the crediting period.
Conclusion	In conclusion, the project has been operational for a significant duration, allowing for adequate assessment of its impact on groundwater recharge through the implemented rainwater harvesting system. The project's sustained operation over this period indicates a commitment to environmental sustainability and water resource management.

D.3.10 Positive Environmental impacts

Means of Project Verification	Site Inspection: Remotely visiting the project location to inspect the rainwater harvesting system and its integration with the local aquifer. Document Review: Examining the Project Concept Note & Monitoring Report (PCNMR) for compliance with environmental standards. Interviews: Talking to the Good Earth Melange Owners' Association and residents to understand the operational effectiveness of the system. Data Analysis: Assessing rainfall data, recharge volumes, and groundwater levels to quantify the environmental benefits.
Findings	Upon verification it was found that, the project at Good Earth Melange, Kochi, demonstrates significant positive environmental impacts. It features a rooftop rainwater harvesting system (RWHS) that captures rainwater for groundwater recharge, reducing groundwater depletion. The design minimizes heat gain, enhancing thermal comfort without excessive energy use. The RWHS also mitigates water logging and flooding during monsoon, improves groundwater quality through dilution, and reduces soil erosion. Moreover, it supports water conservation, ensuring sustainable water supply for the community, and exemplifies an eco-friendly approach to urban living. Overall, the project contributes to environmental sustainability and water security in the region.
Conclusion	In conclusion, the Good Earth Melange project in Kochi, Kerala, demonstrates significant positive environmental impacts through its rooftop rainwater harvesting system (RWHS). The initiative effectively captures and recharges rainwater, reducing groundwater depletion and improving aquifer quality via dilution. It addresses urban water logging, enhances groundwater levels, and ensures sustainable water supply for residents. The project also mitigates soil erosion and contributes to ecological

	balance by supporting local flora and fauna, showcasing a successful model for water conservation and artificial recharge in urban settings.

D.3.11 Project Owner- Identification and communication

Means of Project Verification	Project Documentation: Reviewing official documents such as the Project Concept Note & Monitoring Report (PCNMR) to verify the project owner's details. Site Inspection: Conducting remote audit to inspect the rainwater harvesting system and its operation. Interviews: Speaking with the Good Earth Melange Owners' Association (GEMOA) to confirm their roles and responsibilities in managing the Rainwater Harvesting System (RWHS). Records Check: Examining maintenance records, permits, and ownership documents related to the RWHS to ensure compliance and proper operation.
Findings	Upon verification it was found that, the Good Earth Melange Owners' Association effectively identifies itself as the project owner, maintaining clear communication regarding its roles and responsibilities. It upholds the operation of the RWHS, ensuring the system's functionality and the provision of potable water, while also managing the financial aspects of its maintenance through resident charges. The association's diligent documentation and permit management contribute to the project's transparency and accountability.
Conclusion	In conclusion, the Project Owner (Good Earth Melange Owners' Association) in terms of identification and communication would be that they have effectively implemented a Rainwater Harvesting System (RWHS) at the Good Earth Melange residential complex in Kochi, Kerala. They are responsible for maintaining the system, ensuring potable water supply to residents, and managing the flow of rainwater during monsoon. The project has successfully contributed to groundwater recharge, improved water quality through dilution, and reduced

	water logging and soil erosion. The association has not availed any subsidies for the RWHS, showcasing their commitment to sustainable water management practices. The project serves as a model for other residential complexes, emphasizing the importance of rainwater harvesting in urban areas to address water scarcity and promote environmental sustainability.

D.3.12 Positive Social Impact/Ecological Aspects/Recharge Aspects

Means of Project Verification	Positive Social Impact: Verify the sustainability of wells and reduction in waterborne diseases due to the rainwater harvesting system (RWHs). Confirm that the RWHs has led to a decrease in reliance on tanker water supply and improved groundwater quality through dilution. Ecological Aspects: Ensure that the RWHs is not leading to water logging or vector diseases, and that it is improving the quality of groundwater. Check for any ecological benefits such as reduced soil erosion and increased biodiversity. Recharge Aspects: Assess the effectiveness of the RWHs in recharging bore wells and the success of soak pits in filtering rainwater runoff before it enters recharge zones. Interview users to confirm the availability of well water during non-monsoon seasons.
Findings	Upon verification it was found that, there is significant positive social impact and ecological benefits of the rainwater harvesting system (RWHS) implemented at Good Earth Melange, Kochi. The RWHS has successfully augmented groundwater reserves, improved water quality through dilution, and reduced groundwater pollution, soil erosion, and flooding. It has also enhanced water security for the community, making domestic wells sustainable and the area tanker-free. Ecologically, the project supports biodiversity, attracting migratory birds and improving flora and fauna. The recharge aspect is evident as the RWHS ensures efficient rainwater runoff filtration before entering recharge zones, maintaining well water levels even during non-monsoon periods, indicating successful groundwater

	recharge. This initiative serves as a model for sustainable water management practices in urban residential areas.
Conclusion	In conclusion, the Positive Social Impact/Ecological Aspects/Recharge Aspects highlights the significant benefits of the rainwater harvesting system (RWHS) implemented at Good Earth Melange, Kochi. The RWHS has led to a rise in groundwater levels, ensuring sustainable water supply and reducing dependence on tanker water. It has also improved groundwater quality through dilution and reduced soil erosion. The project has demonstrated the feasibility and effectiveness of RWHS in urban residential areas, serving as a model for water conservation and contributing to ecological balance by preventing water logging and mitigating vector-borne diseases. Overall, the project has had a positive social impact by providing a reliable source of water and enhancing the ecological health of the area.

D.3.13 Sustainable development aspects

Means of Project Verification	Environmental Impact: Assess the project's contribution to groundwater replenishment, reduction in water logging, and improvement in groundwater quality. Social Benefits: Evaluate the project's role in providing potable water, reducing dependence on tanker water supply, and improving local water security. Economic Viability: Verify the cost-effectiveness of the project, including operation and maintenance costs, and its impact on residents' water bills. Technical Soundness: Ensure the RWHS design and implementation are technically sound, including proper installation and maintenance of the system
Findings	Upon verification it was found that, the sustainable development aspects of the UWR Rainwater Offset Unit Standard project at Good Earth Melange, Kochi, focus on enhancing water security and environmental conservation. The project successfully implements a rooftop rainwater harvesting system (RWHS) that captures and recharges

	rainwater, reducing groundwater depletion and improving aquifer quality through dilution. It addresses urban water logging, promotes soil erosion prevention, and supports domestic water needs. The initiative demonstrates a commitment to sustainable practices by not only conserving water but also by providing a model for similar projects, potentially reducing water bills and managing storm-water effectively. The project's approach aligns with the UWR's principles of increasing sustainable water yield in overdeveloped areas, conserving excess water for future use, and serving as an example for recycling and reusing unutilized rainwater
Conclusion	In conclusion, the sustainable development aspects of the Good Earth Melange project in Kochi, Kerala, emphasize the positive environmental impact of the rainwater harvesting system (RWHS). The project successfully captures and utilizes rainwater runoff, reducing dependence on groundwater and contributing to water conservation. It addresses issues such as groundwater depletion, water logging, and soil erosion, while improving groundwater quality through dilution. The RWHS also supports the local community by providing a sustainable water source, enhancing ecological balance, and promoting environmental stewardship. Overall, the project aligns with sustainable development goals by ensuring efficient water management and fostering a more sustainable future for the region.

Section E. Internal Quality Control

During the verification of this project, internal quality control measures were rigorously applied to ensure the accuracy and reliability of the verification process. This included regular internal reviews of verification procedures, documentation, and reports to identify and rectify any errors or inconsistencies. Verification staff underwent continuous training and competency development to ensure proficiency in conducting verifications effectively. Standard Operating Procedures (SOPs) were established to outline clear steps for data collection, analysis, and reporting, promoting consistency and adherence to best practices. Comprehensive documentation management practices were implemented to maintain transparent records of verification activities, including data sources and methodologies used. Peer reviews and discussions among verification team members

were facilitated to validate findings and ensure consensus on conclusions. Continuous improvement processes were in place to monitor and evaluate verification practices, identifying areas for enhancement and optimizing performance over time.

Section F. Project Verification Opinion

Overall, the project appears to be a positive step towards sustainable living and water conservation in an urban residential context.

1. **Sustainability Measures**: The project incorporates sustainable living measures, including a rainwater harvesting system that replenishes the local aquifer, reducing groundwater depletion.
2. **Design Efficiency**: The design of the residential complex maximizes natural ventilation and minimizes common walls, contributing to energy conservation.
3. **Water Conservation**: The project effectively captures and utilizes rainwater, preventing runoff and promoting groundwater recharge, which is crucial in urban areas.
4. **Community Impact**: The initiative serves as a model for other residential complexes, demonstrating the benefits of rainwater harvesting and sustainable practices in urban settings.

In our opinion, the total RoU's over the crediting / verification period stated in the Project Concept Note and Monitoring Report, PCNMR submitted to SQAC are found to be correct and in line with the UWR guidelines.

The verification was done remotely by way of video calls / verification, phone calls and submission of documents for verification through emails.

SQAC is able to certify that the RoU's from the Good Earth Melange, Kochi, India, (UWR ID – 422) for the period **01/04/2020** to **31/12/2023** amounts to **7,625 RoUs**

Appendix 1. Abbreviations

Abbreviations	Full texts
UWR	Universal Water Registry
PP/PO	Project Proponent / Project Owner
PA	Project Aggregator
ROUs	Rainwater offset Units.
SDG	Sustainable Development Goal

CAR	Corrective Action Request
CR	Clarification Request
FAR	Forward Action Request
PCNMR	Project Concept Note & Monitoring report
VR	Verification Report
VS	Verification Statement
COD	Commercial Operation Date

Appendix 2. Competence of team members and technical reviewers

Sr. No.	Role	Name	Education Qualification	Related Experience
1.	Team Leader / Lead Verifier / Validator	Santosh Nair	BE (Chemical) Lead Auditor in ISO 9001,14001, 45001,13485,22301 ,22000,27001,14064-1,2,3	Water Verifier for all UWR RoU Program sectoral scopes such as Scope 1, 2, 3, 4 & 5.
2.	Technical reviewer	Praful Shinganapurkar	BE (Mechanical) Certified Energy Auditor Lead Auditor in ISO 9001,14001 & 45001	Water Verifier for all UWR RoU Program sectoral scopes such as Scope 1, 2, 3, 4 & 5.

Appendix 3. Document reviewed or referenced

Sr. No.	Author	Title	Provider
1.	Optimor Ventures LLC LLC	PCNMR	Optimor Ventures LLC LLC
2.	Optimor Ventures LLC LLC	Water Calculation Sheet	Optimor Ventures LLC LLC

Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

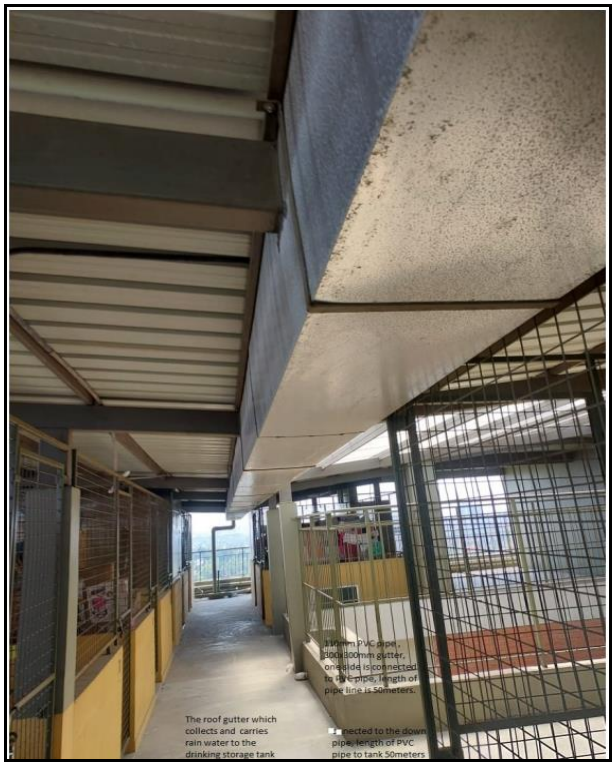
CL ID	00	**Section no.**		**Date:**
Description of CL :				
n/a				
Project Owner's response				**Date:**
n/a				
Documentation provided by Project Owner				
n/a				
UWR Project Verifier assessment				**Date:**
n/a				

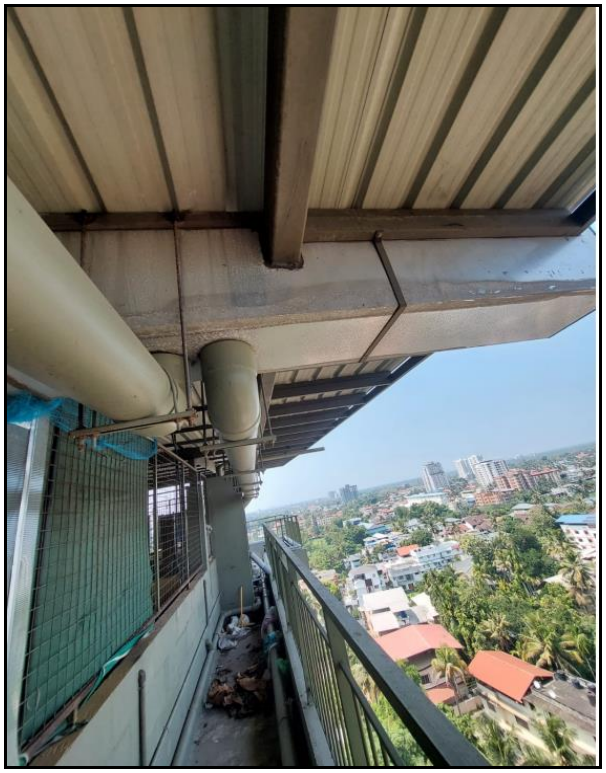
Table 2. CARs from this Project Verification

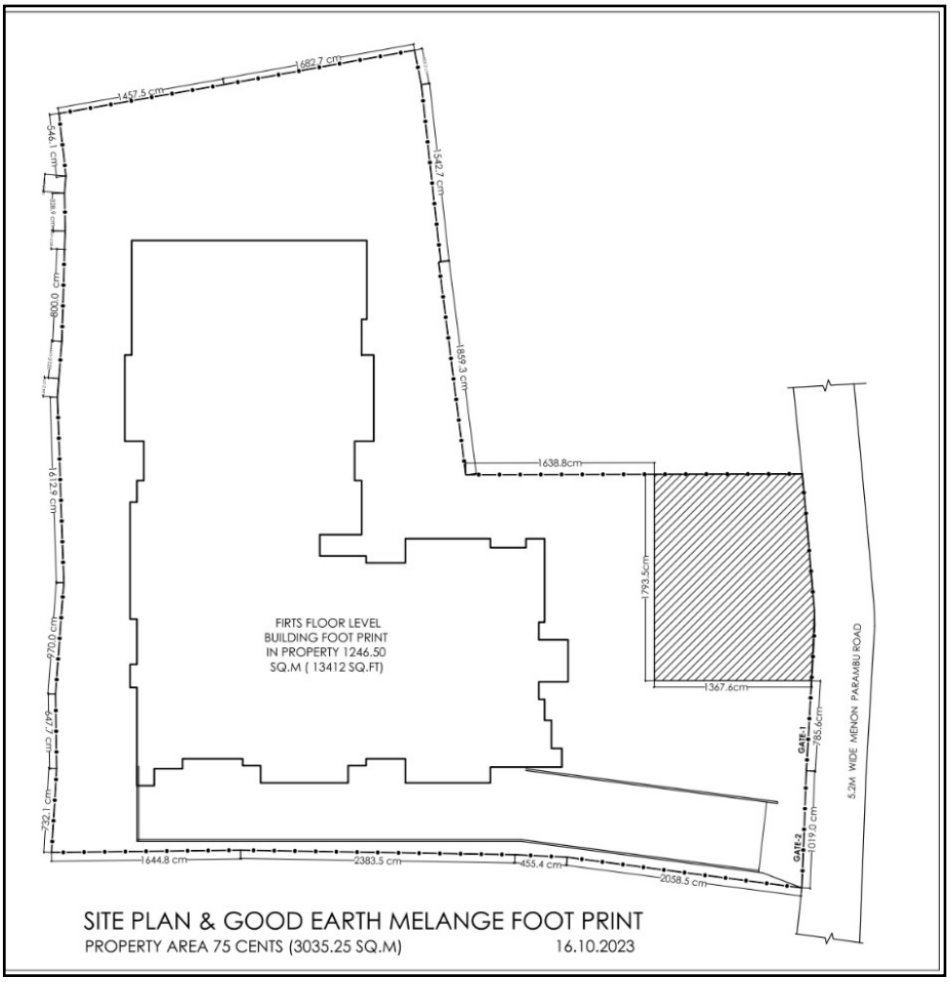
CAR ID	00	**Section no.**		**Date:**
Description of CAR				
n/a				
Project Owner's response				**Date:**
n/a				
Documentation provided by Project Owner				
n/a				
UWR Project Verifier assessment				**Date:**
n/a				

Table 3. FARs from this Project Verification

FAR ID	Nil	**Section no.**		**Date:**
Description of FAR				
n/a				
Project Owner's response				**Date:**
n/a				
Documentation provided by Project Owner				
n/a				
UWR Project Verifier assessment				**Date:**
n/a				


The roof gutter which collects and carries rain water to the drinking storage tank





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